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ABSTRACT

As participation in outdoor recreation grows, natural resources suffer a variety of environmental and social impacts. A minimum-impact back country educational program first developed during the 1970s, Leave No Trace (LNT), has been revitalized by the National Outdoor Leadership School, six federal agencies, and members of the outdoor products industry. Outdoor educators are in a unique position to foster an initial sensitivity toward the environment through teaching LNT. LNT is based on six principles: plan ahead and prepare; camp and travel on durable surfaces; pack it in, pack it out; properly dispose of what you can't pack out; leave what you find; and minimize use of fires. The eight principles of educating for LNT are: design education programs guided by specific objectives; present consistent information in a clear and concise manner; present information during the initial or planning stage of the recreational experience; use a combination of techniques to present LNT materials; present the material in a professional manner; use instructors that are well trained, personable, and committed; and use creativity to educate about LNT. Practical approaches for teaching LNT are role modeling, teachable moments, values clarification, service projects, and discussion of current events related to natural resources. A table depicts a three-level approach for teaching LNT. Contains 19 references. (TD)

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PRACTICAL APPROACHES FOR TEACHING LEAVE NO TRACE

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Abstract

This paper lists and discusses a variety of approaches for presenting and teaching Leave No Trace practices and techniques.

Introduction

According to a recent survey (Outdoor Recreation Coalition of America, 1995), participation in outdoor recreation continues to grow. Tent camping (12% growth in 1994), backpacking (11% growth in 1994) nordic skiing (the second fastest growing sport in the nation), mountain biking (20% growth annually) and mountain and rock climbing (a 32% increase in a single year)are examples of some of the more popular activities. These activities are unique since they require a specific natural resource in order to be conducted. As more and more of our population visit these natural areas, greater and greater demands are placed on the resource, resulting in a variety of environmental and social impacts. Impacts can compromise the objectives of preserving the naturalness of an area, thus making the area less appealing and attractive to the visitor (Hammitt & Cole, 1987). According to researchers (Hendee, Stankey and Lucas, 1990) many of the impacts visible in our natural areas are caused through illegal, careless, unskilled, or uninformed actions, or are simply unavoidable.

To address these problems, land managers have incorporated a variety of direct and indirect management techniques. Of these techniques, indirect management techniques are the most desirable, since these tend to modify behavior, rather than control it (Dustin & McAvoy, 1983). One of the most effective indirect management techniques, education has been identified as a successful method for reducing the impact of recreational activities on natural environments (Roggenbuck & Ham, 1986).

Education is a desirable management tool because it is non-authoritarian, serves the visitor's desires, favors a "light handed" approach, and stresses modification of behavior while maintaining individual choice (Hendee, et al., 1990). For education programs to be effective they must be well organized and contain a variety of communication techniques (Kascenska, 1987). Roggenbuck and Ham (1986) highlight several important factors to consider when developing effective education programs:

> Programs become feasible and effective when managers are able to identify clientele groups and their characteristics, place information where people can easily receive it, provide information early in the decision making process, and present the information in an interesting and understandable way (p. Management-62).

Educational programs developed to reduce resource impacts can be traced back to the 1960s when recreation on our nation's wildlands began to flourish. During this era the National Outdoor Leadership School (NOLS) developed a formal "low impact" education program. Also during this decade federal land management agencies began promoting the "pack-it-in, pack-it-out" slogan to help reduce litter in the backcountry (Doucette & Cole, 1993). During the 1970s a minimum-impact backcountry educational program, Leave No Trace (LNT)was initiated to educate wilderness visitors on the responsible use of wildlands. However, a lack of funding limited the extent and scope of LNT.

RC 021396

Today this program has been revitalized by NOLS, six federal agencies, and members of the outdoor products industry (NOLS, 1993).

Leave No Trace is based on six principles applicable to a variety of natural settings (NOLS, 1993):

1. Plan ahead and prepare.
2. Camp and travel on durable surfaces.
3. Pack it in, Pack it out
4. Properly dispose of what you can't pack out.
5. Leave what you find.
6. Minimize use of fires.

Outdoor educators are in a unique position to convey information and teach the skills necessary to communicate and reinforce LNT principles through a variety of strategies. This paper explores some of the opportunities for teaching LNT.

Principles of Educating for LNT

According to Braithwaite (1990), a number of factors should be considered when developing effective methods for introducing topics associated with wilderness education.

1. *Education programs should be guided by specific objectives.* This includes targeting specific groups and the problems caused by these groups.
2. *Information being shared should be consistent and presented in a clear, and concise manner.* Keep the information simple and avoid overloading participants with too much information, especially in backcountry areas. Information overload in this environment may detract from the recreational experience, since some participants may be seeking solitude and avoiding distractions.
3. *Information should be presented during the initial stage or planning stage of the recreational experience.* This allows participants the opportunity and the willingness to consider any information presented, ask questions, meet equipment needs, and make adjustments to itineraries.
4. *Consider using a combination of techniques to present LNT materials.* By combining techniques, messages can be repeated, thus reinforcing previous material and keeping one's interest.
5. *The material being discussed or introduced should be presented in a professional manner.* This factor is important in maintaining credibility and respect. Information should be up to date, accurate and easy for participants to understand.
6. *Instructors must be well trained and personable.* The characteristics of a good teacher come into play: a positive attitude, is a good communicator, is highly motivated, has good methodology skills, and knows the material being presented.
7. *Instructors must be committed.* Instructors should be committed to LNT principles and practices. In addition, they should believe in the importance of education as an important step in achieving the goals and objectives of LNT.
8. *Creativity is an important approach to educating participants about LNT.* New and innovative approaches for teaching LNT can be beneficial to both instructor and student. New information and materials can help reinforce material previously taught and will keep instructors from becoming bored by teaching the same material in the "same old way".

Teaching Leave No Trace

The following section introduces a variety of practical approaches for teaching LNT principles. These approaches include: Role Modeling, Teachable Moments, Values Clarification, Service, and Current Events.

Role Modeling

Role modeling has been shown to be an effective method for changing resource use behavior, especially in river environments, backpacking areas,

and campgrounds (Cockrell, Bange & Roggenbuck, 1984; Oliver, Roggenbuck & Watson, 1985; Wagstaff & Wilson, 1987). Guides and outdoor leaders exhibiting technical knowledge, expertise, and competence are usually held in high regard by participants. It is important for role models to "walk the talk". Students usually look for this consistency in a individual. If an instructor expects students to follow a particular practice, then the instructor needs to follow it as well. Lead through example and avoid double standards. Once students see and understand the information being presented and practiced, they may change their patterns of behavior (Wagar, 1976).

Teachable Moments

According to Drury & Bonney (1992) a teachable moment is defined as a "lesson presented spontaneously and inspired by specific situations or events encountered during the day" (pg. 130). These events can be used to teach LNT principles and encourage discussions on controversial topics or reinforce material previously presented in the classroom. For example you and your group come face to face with a couple of climbers placing bolts with a power drill in a Wilderness area. A discussion might insue on the issues of power drills and bolting practices in wilderness (they're both prohibited, the impact this encounter had on your Wilderness experience and the environmental damage that can result through these illegal practices.

Values Clarification

Values clarification is a theory that helps people define their values and can be used effectively to teach LNT practices (Attarian, 1996). If a person is successful in clarifying their values then change in behavior will result (Raths, Harmin, &Simon, 1978).Values clarification is based on a model that takes into consideration the three levels of teaching: Facts, concepts, and values (Table 1.). During the fact level the instructor presents specific information on details, events, facts, and the instruction of basic skills. During the concept level, principle supporting the facts are explored, generalizations are drawn from the facts, and if skills are involved, more advanced skills are introduced. At the value level (often overlooked) the material presented is integrated into the student's life by encouraging the student to think, feel, and act on their attitude and experience (Raths, et al., 1978). For values clarification to be successful Instructors should stimulate students to respond honestly to value forming questions by asking "you" questions. For example "How do *you* feel about the use of mountain bikes in Wilderness areas?

Service

Conducting service projects can be an important medium for reinforcing the techniques and practices of LNT and giving something back to the environment. Students who have seen firsthand the damage caused by improper camping and traveling practices may be compelled to do something about it. Service to the environment through trail maintenance and campsite revegetation projects, stream clean-ups, adopt a highway and park programs are ways of getting students actively involved with local organizations and give them an opportunity to interact with land managers and others with similar interests.

Current Events

Current events, especially those related to natural resource issues can be woven into any outdoor activity, LNT, or leadership course to provide information for interesting and thought provoking discussions that can help instructors reinforce classroom discussions. Topics might center around controversial logging efforts (Leavenworth, 1996) or national park closings (ORCA, 1996), and the impact these events have on the recreation experience, the environment and society as a whole.

Conclusion

As outdoor educators we have the ability to effect change in our students. By "teaching through the mountains and not for them" (Miner, 1964) we can help our students grow in confidence and experience but also give them a chance to explore and shape their attitudes and behaviors towards the environment. Creative and innovative approaches to teaching LNT combined with a discussion or unit on resource management should be the foundation of an outdoor program. Through this process students can begin to develop "an initial sensitivity toward the environment, the first and essential step on the path toward increased understanding of environmental processes, increased understanding of our place in, and dependence upon, the ecosystem, and . . . to action on behalf of the environment" (Ford and Blanchard, 1993 p.54).

Table 1. Teaching Leave No Trace Through a Three Level Approach

FACT LEVEL

LNT is based on six principles:

1. Plan ahead and prepare.
2. Camp and travel on durable surfaces.
3. Pack it in, pack it out
4. Properly dispose of what you can't pack out.
5. Leave what you find.
6. Minimize the use of fire.

CONCEPT LEVEL

1. In what ways can pre-trip planning help reduce environmental impact?
2. Why are high-impact campsite the best choice for camping with large groups?
3. Why is Pack it in, pack it out a good practice to follow?
4. Demonstrate the construction of a "cathole".
5. Explain "take only pictures, leave only footprints".
6. Demonstrate the use of a firepan.

VALUE LEVEL

1. What does the LNT ethic mean to you?
2. In what ways can this ethic be practiced in your everyday life?
3. Is Wilderness important to you? To society? And why?
4. Do you think a quota system is important for reducing impacts to backcountry areas? Explain your answer.
5. What are your concerns about the management of backcountry areas?

REFERENCES

Attarian, A. (1996). Integrating values clarification into outdoor adventure programs and activities. *Journal of Physical Education, Recreation and Dance*, 67(8), 41-44.

Braithwaite, A. M. (1990). Principle of communicating to backcountry visitors. In: D.W.Lime (Ed.). *Managing America's Enduring Wilderness Resource: Proceedings of the Conference;* 1989 September 11-17, Minneapolis, MN St. Paul, MN: Minnesota Agricultural Experiment Station: 96-102.

Cockrell, D.E., Bange, S. P.& Roggenbuck,J. W. (1984). Persuasion and normative influence in commercial river recreation. *Journal of Environmental Education,* 15(4), 20-25.

Doucette, J. E. & Cole, D. N., (1993). *Wilderness visitor education: Information about alternative techniques.* General Technical Report INT-295. Ogden, UT: United States Department of Agriculture, Forest Service, Intermountain Research Station.

Drury, J. & Bonney, B.F. (1993. *The backcountry classroom: Lesson plans for teaching in the wilderness.* Merrillville, IN: ICS Books.

Ford, P. & Blanchard, J. (1993). *Leadership and administration of outdoor pursuits.* State College, PA: Venture Publishing.

Hammitt, W.E. & Cole, D.N. (1987). *Wildland recreation: Ecology and management.* New York, NY: John Wiley and Sons.

Hendee, J C., Stankey, G.H.& Lucas, R.C.(1990). *Wilderness management.* Golden, CO: North American Press.

Kascenska, J.R. (1987). *A program for wilderness education in Virginia.* Unpublished master's thesis. Blacksburg, VA: Virginia Polytechnic Institute and State University.

Leavenworth, S. (1996, November 16). Whose woods these are. *News and Observer, pp. 11a, 17a.*

McAvoy, L.H.& Dustin, D.L. (1983). Indirect versus Direct regulation of behavior. *Journal of Park and Recreation Administration,* 1(3),12-17.

Miner,J.L. (1964). Is our youth going soft? *Princeton Alumni Weekly,* XLIV, pg. 14.

National Outdoor Leadership School. (1993). *Leave no trace background* (brochure). Lander, WY: Author.

Outdoor Recreation Coalition of America. (1995). *State of the industry report.* Boulder, CO: Author.

Raths, L.E., Harmin, M.& Simon, S. B. (1978). *Values and teaching.* Columbus, OH: Charles E. Merrill.

Roggenbuck, J.W. & Ham, S. (1986). Use of information and education in recreation management. In *President's commission on Americans outdoors: A literature review* (management- 59-72). Washington, DC: U.S. Government Printing Office.

Oliver, S.S., Roggenbuck, J.W. & Watson, A.E. (1985). Education to reduce impacts in forest campgrounds. *Journal of Forestry*, 83(4), 234-236.

Wagar, J.A. (1976). Evaluating the effectiveness of intrepretation. *Journal of Intrepretation.*, 1(1), 39-43.

Wagstaff, M.C.& Wilson,B.E. (1987). The evaluation of litter behavior modification in a river environment. *Journal of Environmental Education, 20(1), 39-44.*